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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/488,677	01/21/2000	Nobuaki Abe	P18580	4779

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EXAMINER

WU, JINGGE

ART UNIT PAPER NUMBER

2623

DATE MAILED: 01/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/488,677

Applicant(s)

ABE, NOBUAKI

Examiner

Jingge Wu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9, 11, 12, 14 and 15 is/are rejected.
- 7) ☐ Claim(s) 10, 13 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 11-12 and 14-15 are rejected under 35 U.S.C. 102(a) as being anticipated by US 5875039 to Ohsawa et al.

As to claims 11-12, Ohsawa discloses a pixel number increasing method or apparatus comprising:

an DCT processor applies orthogonal DCT to image data comprised of a plurality pixels to obtain orthogonal transformation coefficients (col. 4, lines 41-col. 5 lines 67);
and

an expanded image generating processor that applies inverse DCT to the coefficients to obtain expanded image data comprises of a greater number of pixels (col. 4, lines 41-col. 5 lines 67, col. 8 and col. 16).

As to claims 14-15, these elements have been addressed with regard to claims 11-12 above.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa in view of US 6426974 to Takahashi et al. or US 5159468 to Yoshida et al.

As to claims 1 and 9, Ohsawa discloses an image compression and expansion apparatus comprising:

an DCT processor read input image data and generate reduced image size DCT coefficients and stored the data in recording memory (Fig. 7, col. 10 lines 22-63);

an decoding image generating processor that applies inverse DCT to the coefficients to obtain expanded image data comprises of a greater number of pixels (col. 4, lines 41-col. 5 lines 67, col. 8 and col. 16).

Ohsawa does not explicitly mention reduce image to image having smaller number of pixels which is well known in the art.

Takahashi, in an analogous environment, discloses reducing pixel number by resolution conversion and then applying DCT (Fig. 2c and 2d, col. 8).

Also, Yoshida, in an analogous environment, discloses an image reduction circuit to reduce input image pixels (Fig. 8, col. 6 line 49-col. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use schemes of Takahashi or Yoshida in order to quickly transmitting the coded data (Takahashi, col. 3; Yoshida, col. 1). Doing so would reduce

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DCT coefficients needed to be transmitted so that the efficiency of the image processing apparatus is improved.

As to claim 2, the elements are addressed with regard to claim 1.

As to claim 3, Yoshida further discloses a averaging filtering operation to obtain the reduced number of pixels (col. 3-5).

As to claims 4-5, Ohsawa further discloses 8x8 matrix (Fig. 5) and n and m (now is 2) are positive number.

As to claim 7, Ohsawa further discloses the enlarged output image could be as same size as input image and thus same number of pixels (col. 4, lines 41-col. 5 lines 67, col. 8 and col. 16).

As to claims 6 and 8, Ohsawa does not explicitly mention 64x64 pixels which is well known in the art.

Examiner takes Official Notice that the feature is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use 64x64 pixel scheme in order to quickly transmitting the coded data.

Allowable Subject Matter

Claims 10, 13 and 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5216516 to Tanaka et al, US 6473207 to Miyamoto, JP 407044699A to Murata disclose methods for expanding and reducing decoded image.

Contact Information

Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

